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## IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re application of

Mitsuaki OSHIMA et al.

Serial No. 09/672,946

Filed September 29, 2000

COMMUNICATION SYSTEM

Confirmation No. 7022

Docket No. 2000 1328

Group Art Unit 2634

Examiner A. Le

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MAR 2 1 2003

Technology Center 2600

## **AMENDMENT**

Assistant Commissioner for Patents, Washington, D.C.

THE COMMISSIONER IS AUTHORIZED TO CHARGE ANY DEFICIENCY IN THE FEES FOR THIS PAPER TO DEPOSIT ACCOUNT NO. 23-0975

Sir:

In response to the Office Action mailed September 16, 2002, the period for response to which having been extended by three months to March 16, 2003, please amend the application as follows.

## IN THE CLAIMS:

Please cancel claims 13-18 without prejudice or disclaimer to the subject matter therein and add new claims 19-30 as follows.

19. A signal transmission and receiving apparatus comprising a transmission apparatus and a receiving apparatus.

said transmission apparatus comprising:

- a mapper operable to map a data stream to an n-level mapped signal;
- a DC offset generator operable to add a DC offset to the n-level mapped signal to produce a VSB modulated signal including a carrier produced by the DC offset; and
  - a transmitter operable to transmit the VSB modulated signal;

said receiving apparatus comprising:

- a demodulator operable to demodulate the VSB modulated signal to the data stream.

Chry